

Date: Wednesday, 03/06/2009 10:48:54 AM  
 User: Julie Dawson

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : STEM  
 Job Number : 48357  
 Estimate Number : 10857  
 P.O. Number :  
 This Issue : 03/06/2009 S.O. No. :  
 Prsht Rev. : NC Part Number : D34073  
 First Issue : / / Type : MACHINED PARTS Drawing Number : D3407 REV E  
 Previous Run : 46041 Project Number : N/A  
 Material :  
 Due Date : 15/06/2009 Qty: 40 Um: Each  
 Written By :  
 Checked & Approved By : Julie Dawson  
 Comment : Est Rev:A 05.10.18 New issue KJ/EC  
 Est Rev:B Now on Doosan 08-05-14 JLM Verified By:DD  
 Est Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M174R0750 17-4 round bar .750



Comment: Qty.: 0.3843 f(s)/Unit Total : 15.3720 f(s)  
 Material: 17-4ph SS Round Bar Ø0.750(M17-4-R0.750)  
 Identify for D3407-3  
 Batch: M110777

AP 09.06.05 (40)

2.0 DOOSAN LATHE DOOSAN LATHE



Comment: DOOSAN CNC LATHE

1-Turn as per Folio FA597 Rev: E & Dwg D3407 Rev: E

2-Deburr

AP 09.06.05 (40)

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

AP 09.06.05 (40)

4.0 QC8 SECOND CHECK



Comment: SECOND CHECK

M.A 09/06/06

5.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: Eric L

AP 09/06/08 (40)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Wednesday, 03/06/2009 10:48:54 AM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEM

Job Number: 48357

Part Number: D34073

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



09/06/08  
JF

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mf 09-06-08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 48357
<b>Description:</b> Stem		<b>Part Number:</b> D3407-3
<b>Inspection Dwg:</b> D3407	<b>Rev:</b> E	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

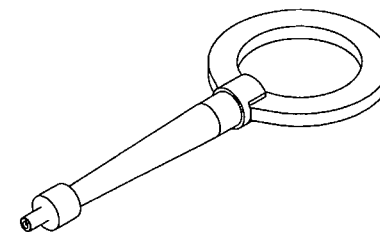
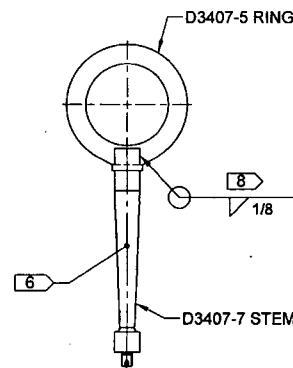
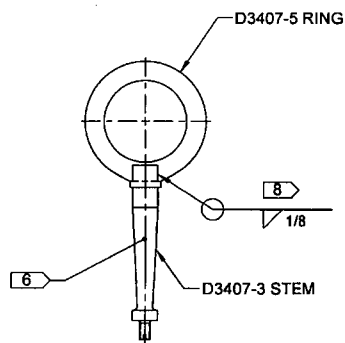
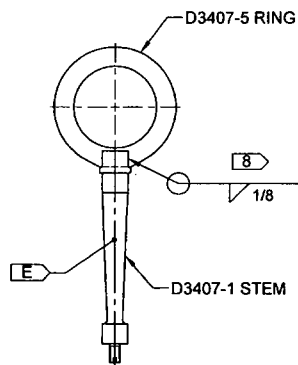
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	.063	/			
1/4-28 UNF	Max: 0.2668 Min: 0.2635	.265	/			
Major Ø	Max: 0.249 Min: 0.2425	.245	/			
Ø0.625	+/-0.010	.625	/			
Ø0.363	+/-0.010	.363	/			
Ø0.750	+/-0.010	.750	/			
R0.100	+/-0.010	R.100	/			
0.470	+/-0.010	.470	/			
0.250	+/-0.010	.250	/			
2.555	+/-0.010	2.555	/			
3.305	+0.000/-0.010	3.360	/			
4.325	+/-0.010	4.326	/			
0.150	+/-0.010	.154	/			
0.550	+/-0.010	.556	/			
0.625	+/-0.010	.627	/			
0.250	+0.010/-0.000	.254	/			

<b>Measured by:</b> [Signature]	<b>Audited by:</b> H.A	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 09.06.05	<b>Date:</b> 09/06/06	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	06.11.08	New Issue	KJ/JLM	
B	07.09.26	Tolerances revised	KJ/EC	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	[Signature]

QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM



**RELEASED**  
08-08-01-1111

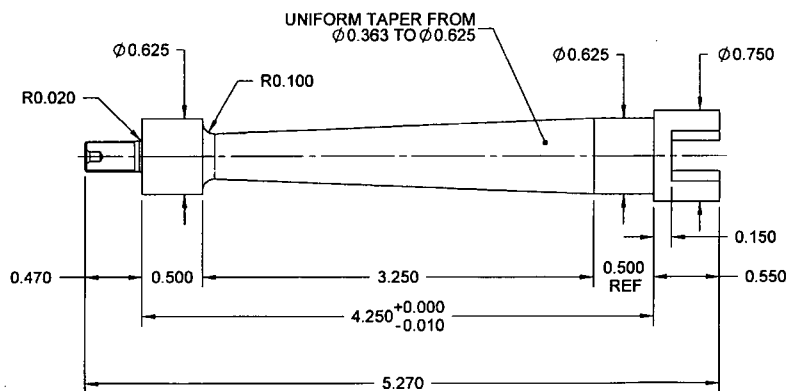
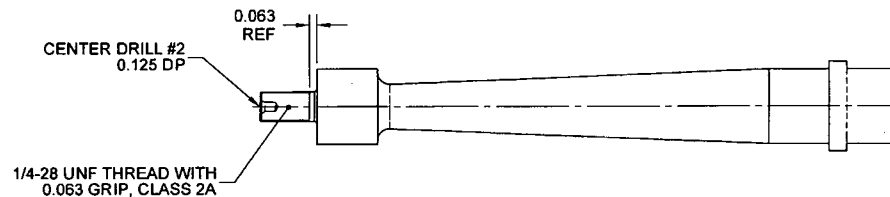
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**D3407-043 TOW RING**

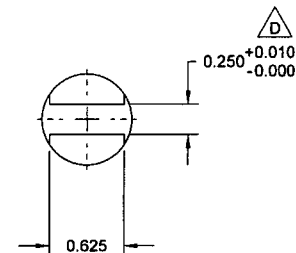
**D3407-045 TOW RING**

- NOTES:**  
 1) MATERIAL: N/A  
 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)  
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
 4) UNITS: INCHES UNLESS OTHERWISE NOTED  
 5) BREAK SHARP EDGES: N/A  
 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER  
 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs  
 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 8 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/3 (ZN B8-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/3 LONGER FOR FIT W/WASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
REV.	DESCRIPTION	BY	DATE
DESIGN		<b>DART AEROSPACE USA, INC.</b>	
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MFG. APPR.		D3407	SHEET 1 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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**D3407-1 STEM**

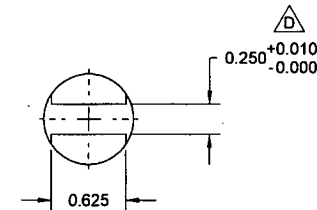
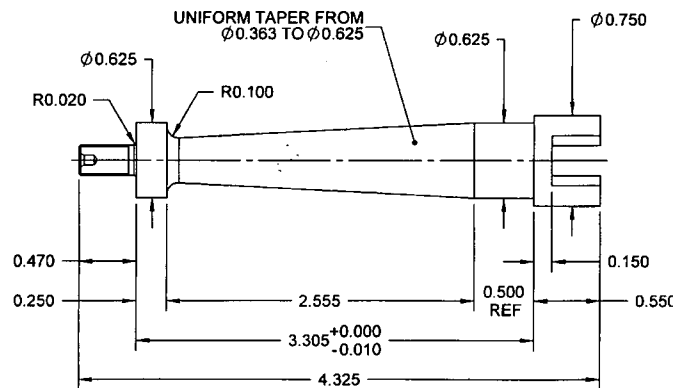
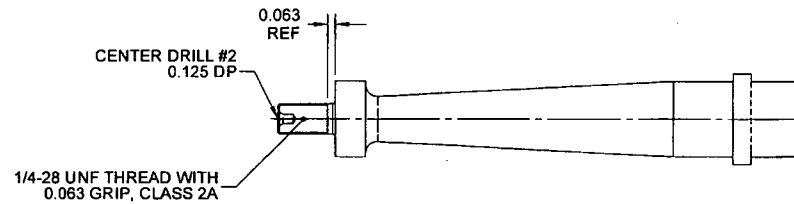


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NO. 48357

- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.33 lbs

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**D3407-3 STEM**

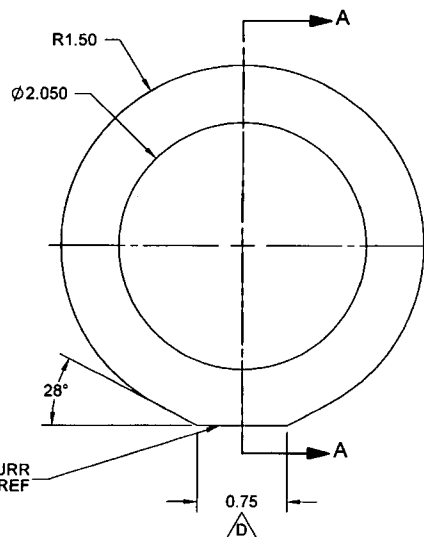
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- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.27 lbs

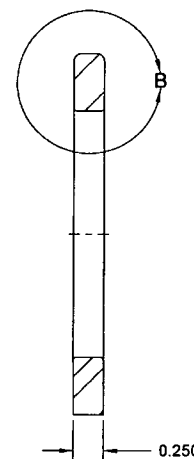
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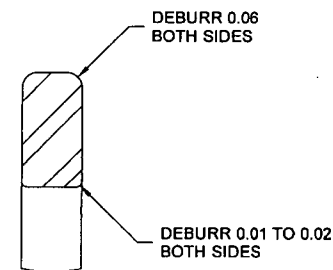
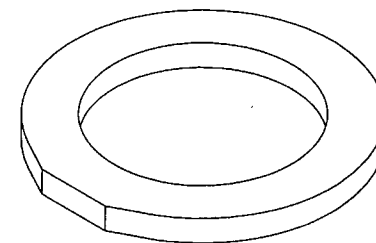




**D3407-5 RING**



**SECTION A-A**



**DETAIL B  
SCALE 2X**

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08.07.23

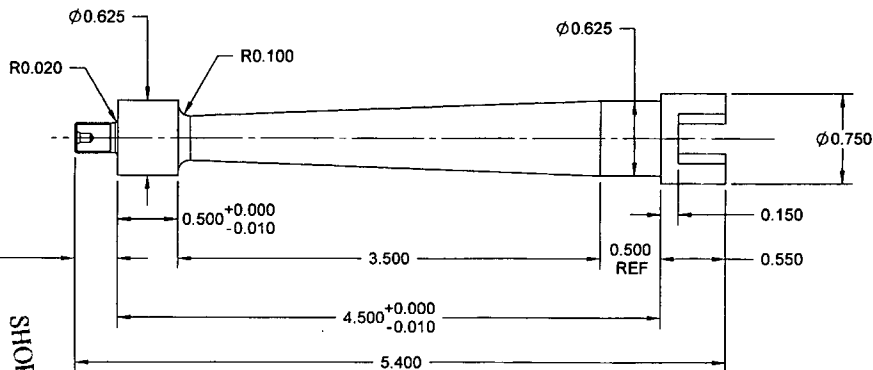
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- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.27 lbs

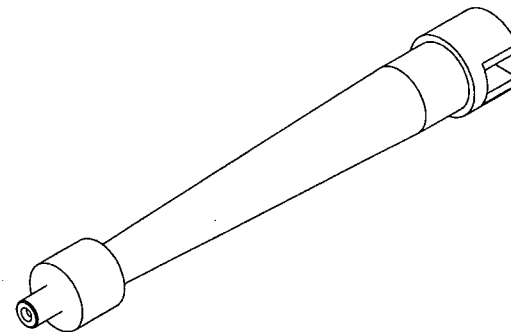
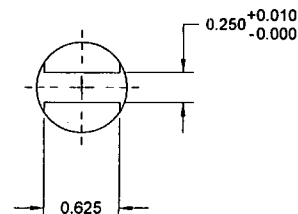
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NO 48357

0.063  
REF  
CENTER DRILL #2  
0.125 DP

1/4-28 UNF THREAD WITH  
0.063 GRIP, CLASS 2A








**D3407-7 STEM**



NO. 178357  
WORK ORDER  
SUBJECT TO AMENDMENT  
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- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.34 lbs

**RELEASED**  
A.C.D. M.P.

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